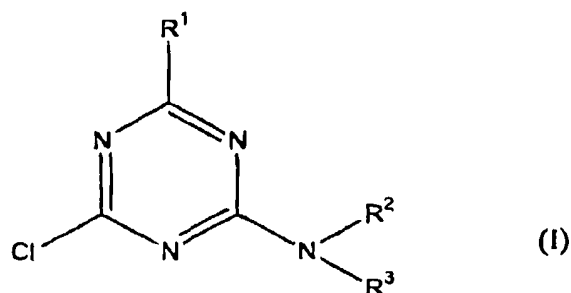


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# AMENDMENT

## IN THE CLAIMS

1. (Currently Amended) A process for the preparation of compounds of the formula (I) or salts thereof



in which

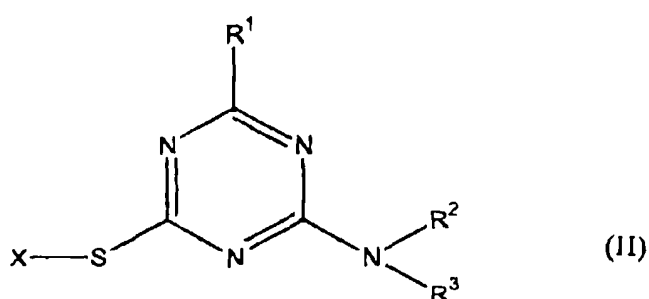
R<sup>1</sup> is (C<sub>1</sub>-C<sub>8</sub>)alkyl or (C<sub>3</sub>-C<sub>8</sub>)cycloalkyl, where each of the two above radicals independently of one another is unsubstituted or unsubstituted, and

R<sup>2</sup>, R<sup>3</sup>, R<sup>2</sup>, R<sup>3</sup> in each case independently of one another are hydrogen, amino, hydroxyl, formyl or unsubstituted (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>1</sub>-C<sub>8</sub>)alkylamino, di[(C<sub>1</sub>-C<sub>8</sub>)alkyl]amino, (C<sub>1</sub>-C<sub>8</sub>)alkyloxy, aryl, aryloxy, (C<sub>3</sub>-C<sub>8</sub>)cycloalkyl, [(C<sub>1</sub>-C<sub>8</sub>)alkyl]carbonyl, [(C<sub>1</sub>-C<sub>8</sub>)alkoxy]-carbonyl, arylcarbonyl, aryloxy carbonyl, (C<sub>1</sub>-C<sub>8</sub>)alkylsulfonyl, arylsulfonyl or an unsubstituted or substituted saturated heterocyclyl radical, heterocyclyloxy radical, heterocyclylamino radical, each of which has 3 to 6 ring atoms and 1 to 3 hetero ring atoms selected from the group consisting of N, O and S, or

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$R^2$ ,  $R^3$  together with the nitrogen from the group  $NR^2R^3$  are a saturated heterocyclic radical having 3 to 6 ring atoms and 1 to 4 hetero ring atoms, where, in addition to the nitrogen atom, the other hetero ring atoms which may exist are selected from the group consisting of N, O and S and the heterocycle is unsubstituted or substituted,

which comprises converting 2-amino-4-thio-1,3,5-triazines of the formula (II)



in which X represents hydrogen,  $(C_1-C_6)$ alkyl,  ~~$(C_1-C_6)$ alkenyl~~  $(C_2-C_6)$ alkenyl,  $(C_2-C_6)$ alkynyl or phenyl, where each of the last mentioned 4 radicals is unsubstituted or substituted, or represents a 2-amino-4-thio-1,3,5-triazine radical which is bonded via sulfur and equally substituted compared to the other triazine ring in the compound of formula I, by chlorination in the presence of an essentially anhydrous protic solvent.

2. (Original) The process in claim 1, wherein

$R^1$  is  $(C_1-C_8)$ alkyl or  $(C_3-C_8)$ cycloalkyl, where each of the two above-mentioned radicals independently of one another is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl, cyano, nitro, thiocyanato, formyl,  $(C_1-C_8)$ alkoxy,

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(C<sub>1</sub>-C<sub>8</sub>)alkylthio, (C<sub>1</sub>-C<sub>8</sub>)alkylsulfinyl, (C<sub>1</sub>-C<sub>8</sub>)alkylsulfonyl, [(C<sub>1</sub>-C<sub>8</sub>)alkyl]carbonyl, [(C<sub>1</sub>-C<sub>8</sub>)alkoxy]carbonyl, (C<sub>2</sub>-C<sub>8</sub>)alkenyl, (C<sub>2</sub>-C<sub>8</sub>)alkynyl, (C<sub>3</sub>-C<sub>8</sub>)cycloalkyl, phenyl and, in the case of cycloalkyl, also (C<sub>1</sub>-C<sub>8</sub>)alkyl, each of the last-mentioned 11 radicals being unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C<sub>1</sub>-C<sub>4</sub>)alkoxy, (C<sub>1</sub>-C<sub>4</sub>)alkylthio and, in the case of cyclic radicals, also (C<sub>1</sub>-C<sub>4</sub>)alkyl and (C<sub>1</sub>-C<sub>4</sub>)haloalkyl.

3. (Currently Amended) The process as claimed in claim 1, wherein,

R<sup>1</sup> is (C<sub>1</sub>-C<sub>6</sub>) alkyl which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl, cyano, nitro, thiocyanato, formyl, (C<sub>1</sub>-C<sub>4</sub>)alkoxy, (C<sub>1</sub>-C<sub>4</sub>)alkylthio, (C<sub>1</sub>-C<sub>4</sub>)alkylsulfinyl, (C<sub>1</sub>-C<sub>4</sub>)alkylsulfonyl, [(C<sub>1</sub>-C<sub>4</sub>)alkyl]carbonyl, [(C<sub>1</sub>-C<sub>4</sub>)alkoxy]carbonyl, (C<sub>2</sub>-C<sub>4</sub>)alkenyl, (C<sub>2</sub>-C<sub>4</sub>)alkynyl, (C<sub>3</sub>-C<sub>6</sub>)cycloalkyl, phenyl, where each of the last-mentioned 10 radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C<sub>1</sub>-C<sub>4</sub>)alkoxy, (C<sub>1</sub>-C<sub>4</sub>)alkylthio and, in the case of cyclic radicals, also (C<sub>1</sub>-C<sub>4</sub>)alkyl and (C<sub>1</sub>-C<sub>4</sub>)haloalkyl, or  
(C<sub>3</sub>-C<sub>6</sub>)cycloalkyl which is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl, cyano, nitro, thiocyanato, formyl, (C<sub>1</sub>-C<sub>4</sub>)alkyl, (C<sub>1</sub>-C<sub>4</sub>)alkoxy, (C<sub>1</sub>-C<sub>4</sub>)alkylthio, (C<sub>1</sub>-C<sub>4</sub>)alkylsulfinyl, (C<sub>1</sub>-C<sub>4</sub>)alkylsulfonyl, [(C<sub>1</sub>-C<sub>4</sub>)alkyl]carbonyl, [(C<sub>1</sub>-C<sub>4</sub>)alkoxy]carbonyl, (C<sub>2</sub>-C<sub>4</sub>)alkenyl, (C<sub>2</sub>-C<sub>4</sub>)alkynyl, (C<sub>3</sub>-C<sub>6</sub>)cycloalkyl, phenyl, where each of the last-mentioned 11 radicals is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C<sub>1</sub>-C<sub>4</sub>)alkoxy, (C<sub>1</sub>-C<sub>4</sub>)alkylthio and, in the case of cyclic radicals, also (C<sub>1</sub>-C<sub>4</sub>)alkyl and (C<sub>1</sub>-C<sub>4</sub>)haloalkyl, and

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- $R^2, R^3$  in each case independently of one another are hydrogen, amino,  $(C_1-C_6)$ alkyl,  $(C_1-C_4)$ alkylamino, di $[(C_1-C_4)$ alkyl]amino,  $(C_1-C_4)$ alkyloxy,  $(C_3-C_6)$ cycloalkyl,  $[(C_1-C_4)$ alkyl]carbonyl,  $[(C_1-C_4)$ alkoxy]carbonyl, phenylcarbonyl, phenoxycarbonyl,  $(C_1-C_4)$ alkylsulfonyl, phenylsulfonyl or a saturated heterocyclyl radical having 3 to 6 ring atoms and 1 to 3 hetero ring atoms selected from the group consisting of N, O and S, where phenyl in the abovementioned radicals or the heterocyclyl radical independently of one another are unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl,  $(C_1-C_4)$ alkoxy,  $(C_1-C_4)$ alkyl, and  $(C_1-C_4)$ haloalkyl, or
- $R^2, R^3$  together with the nitrogen atom of the group  $NR^2R^3$  is a saturated heterocyclic radical which has 3 to 6 ring atoms and 1 to 3 hetero ring atoms, where, in addition to the nitrogen atom, the other hetero ring atoms which may be present are selected from the group consisting of N, O and S and the heterocycle is unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, hydroxyl,  $(C_1-C_4)$ alkoxy,  $(C_1-C_4)$ alkyl and  $(C_1-C_4)$ haloalkyl.

4. (Previously Presented) The process as claimed in claim 1, wherein a chlorinating agent selected from the group consisting of chlorine, salts or hypochlorous acid, phosphorus pentachloride, phosphoryl chloride and thionyl chloride is employed.

5. (Previously Presented) The process as claimed in claim 1, wherein the chlorinating agent is employed in an amount of 1 to 100 equivalents based on the compound of the formula (II).

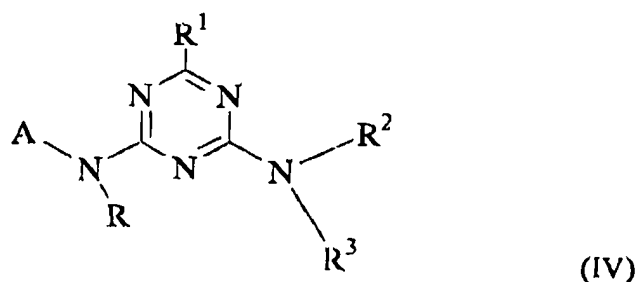
6. (Previously Presented) The process as claimed in claim 1, which is carried out in the presence of an aprotic or essentially anhydrous protic solvent or mixtures of these.

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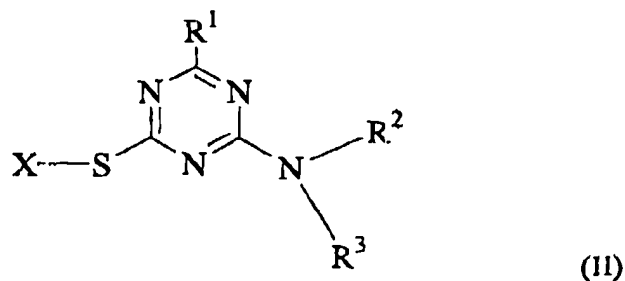
7. (Previously Presented) The process as claimed in claim 6 which is carried out at temperatures between -40°C and the boiling point of the solvent or mixtures of solvents employed.

8. (Previously Presented) The process as claimed in claim 1, which is carried out at temperatures between 0°C and 50°C.

9. (Currently Amended) A process for the preparation of a herbicidal aminotriazine of the formula (IV) or a salt thereof,];

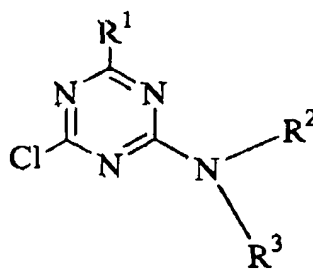


which comprises chlorinating a 2-amino-4-thio-1,3,5-triazine of the formula (II);



to give a compound of the formula (I);

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(I)

and reacting the resulting compound of the formula (I) with an amine of the formula (III):



(II)

to give the herbicidal aminotriazine of the formula (IV), where in formulae (I), (II), (III) and (IV), the radicals  $R^1$ ,  $R^2$ ,  $R^3$  and  $X$  are as defined in claim 1 and  $A$  and  $R$  are organic radicals which in conjunction with the residual molecular structure of the formula (IV) constitute the chemical structure of a herbicidally active aminotriazine.

10. (Previously Presented) The process as claimed in claim 9, wherein  $A$  is a  $(C_1-C_6)$ alkylene chain which is substituted in the  $\alpha$ -position relative to the amino group by an unsubstituted or substituted alkyl radical and in the  $\omega$ -position by an optionally substituted aryl, heteroaryl, aryloxy or heteroaryloxy radical and which is further unsubstituted or substituted further with substituents selected from the group consisting of halogen, alkyl, alkoxy and hydroxyl, and  $R$  is hydrogen or alkyl.

11. (Cancelled)

~~11~~ 12. (Currently Amended) The process as claimed in claim 1, wherein said essentially anhydrous protic solvent is a carboxylic acid.

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~~12~~ 13. (Currently Amended) The process as claimed in claim 1, wherein said essentially anhydrous protic solvent is selected from the group consisting of formic acid, acetic acid, n-propionic acid, n-butanoic acid and isobutanoic acid.

~~13~~ 14. (Currently Amended) The process as claimed in claim 1, wherein said essentially anhydrous protic solvent is glacial acetic acid.

~~14~~ 15. (Currently Amended) The process as claimed in claim 1, wherein X is (C<sub>1</sub>-C<sub>4</sub>)alkyl.